

**BIOLOGY 1107 (L01-L03) BIOLOGY II LABORATORY  
SRSU SPRING 2022 SYLLABUS**

**Lab Room:** WSB 206  
**Lab Section/Time:** L01: Tuesday 1:00 - 2:50; L02: Tuesday 3:00 - 4:50;  
L03: Wednesday 3:00 - 4:50  
**Lab instructor:** Jeff Keeling (L01) jkee675@sulross.edu  
Andrew Soria (L02) ats21bm@sulross.edu  
Ben Thomas (L03) bdt19tl@sulross.edu  
Office hours: pending, will update soon.

**Course description:** This class provides a survey of evolutionary/ecological concepts in biology as well as teaches students fundamental skills and laboratory methods in science.

**Course objectives:**

1. Utilize the scientific method.
2. Develop an understanding of the role of evolutionary theory and its relation to biological diversity.
3. Explore the physical, morphological, and physiological characteristics of living organisms.
4. Enhance critical thinking skills.

**Grading:** The table below illustrates the grading for this course.

9 Quizzes @ ca. 20 pts each	180
3 Lab practicals @ ca. 100 pts each	300
Lab Report	50
Additional Assignments	50
<b>Total Credit</b>	<b>580 points</b>

**Attendance:** Students missing more than three labs will be dropped from the class per university policy and receive an F in the course. If you are missing class due to a COVID exposure, we must receive a notification from the university in order for you to receive your points. If you miss class, it is your responsibility to remain up to date with the course material online.

COVID-19 Response: Hand sanitizer stations are placed at all building entrances and students are encouraged to use them in addition to handwashing. Given the high level of contagion of this coronavirus and the implications of its disease COVID-19, it's highly recommended you wear a mask and socially distance in public spaces.

**STUDENT LEARNING OUTCOMES (SLOS)** The graduating biology student graduating with a BS in Biology should be able to: 1) The student will be able to demonstrate an understanding of basic biological concepts, including but not limited to evolution via natural selection, cell theory, and the role and function of DNA. 2) The student will be able to demonstrate utilization of various

field techniques toward addressing scientific questions in the specific discipline. These field techniques can include, but are not limited to, plant collection and processing, various animal collection techniques, ecological surveying and sampling, and biodiversity indexing. 3) The student will be able to use biological instrumentation to solve biological problems using standard observational strategies. 4) The student will develop writing skills by summarizing and critiquing recent relevant biological literature.

**CORE OBJECTIVES ADDRESSED:** 1) Communication Skills – Students will effectively communicate the results of scientific investigations; using oral, written, and visual communication, either in group discussions or on written exams. 2) Critical Thinking Skills – Students will include creative thinking, innovation, inquiry, and analysis required to relate new information with previous information in a way that demonstrates the diversity and similarity due to evolutionary ancestry. 3) Empirical and Quantitative Skills – Students will use basic math skills to solve problems (e.g. related to genetic outcomes, cellular energy production, and probability) resulting in informed conclusions. 4) Teamwork Skills – Students will work effectively with others to support a shared goal during lab sessions on activities, such as dissections, problem solving, and other experimental procedures.

**MARKETABLE SKILLS:** A student getting a degree in the Biological sciences would be expected to acquire the following marketable skills by graduation. 1) Students will be able to organize, analyze, and interpret data. 2) Students will be proficient at using presentation software. 3) Students will acquire experience in managing time and meeting deadlines. 4) Students will gain the ability to speak effectively and write concisely about scientific topics. 5) Students will acquire experience and guidance in the development of professional email correspondence.

ADA Statement: Any student who because of a disability, may require special arrangements in order to meet the course requirements should contact the instructor as soon as possible to make necessary arrangements. If an accommodation is needed, students must present their accommodation letter, obtained from Accessibility Services, as soon as possible. Please note that instructors are not permitted to provide classroom accommodations to a student until the appropriate verification has been received. Accessibility Services is in Ferguson Hall room 112. You can make an appointment by calling Mary Schwartz Grisham at 432 837-8203.

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copying from professional works or internet sites without citation; collaborating on a course assignment, examination, or quiz when collaboration is forbidden.

Tentative Laboratory Schedule:

<b>Date</b>	<b>Topic</b>
Jan 18/19	The Scientific Method
Jan 25/26	Finding/Utilizing Scientific Literature
Feb 1/2	Natural Selection
<b>Feb 8/9</b>	<b>Lab Practical #1</b>
Feb 15/16	Phylogeny/Systematics
Feb 22/23	Microscopy, Bacteria, Protists
Mar 1/2	Plant/Fungi Diversity
<b>Mar 8/9</b>	<b>***SPRING BREAK***</b>
Mar 15/16	Plant Anatomy
<b>Mar 22/23</b>	<b>Lab Practical #2</b>
Mar 29/30	Animal Diversity/ Form and Function
April 5/6	Invertebrates
Apr 12/13	Vertebrates
Apr 19/20	<b>Lab Practical #3/Lab reports due</b>